

AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of the Claims:

1. (Currently Amended) An organic stripping composition comprising a first compound including a hydroxyl ion (OH^-), a second compound including a fluorine ion (F^-) and a sufficient amount of an oxidizing agent to control the pH of the composition within the range of from about 6.5 to about 8.0, wherein the organic stripping composition removes remaining residues after dry etching and / or ashing and prevents pitting of an Si layer and / or damage to a layer including at least one material selected from the group consisting of W, Al, Ti, TiN, and CoSi.

2. (Original) The organic stripping composition as claimed in claim 1, wherein the oxidizing agent is nitric acid (HNO_3).

3. (Original) The organic stripping composition as claimed in claim 2, wherein the pH of the composition is within the range of from about 6.5 to about 7.0.

4. (Original) The organic stripping composition as claimed in claim 1, wherein the oxidizing agent is at least one selected from the group consisting of hydrogen peroxide (H_2O_2), peroxonitric acid (HNO_4), peroxophosphoric acid (H_3PO_5), peroxosulfuric acid (H_2SO_5), and mixtures thereof.

5. (Original) The organic stripping composition as claimed in claim 1, wherein the amount of the second compound including the fluorine ion is within the range of from about 0.0001 to about 50% by weight, based on the total weight of the composition.

6. (Original) The organic stripping composition as claimed in claim 1, wherein the amount of the second compound including the fluorine ion is within the range of from about 0.0001 to about 1% by weight, based on the total weight of the composition.

7. (Original) The organic stripping composition as claimed in claim 1, wherein the composition comprises acetic acid, ammonium hydroxide, hydrogen fluoride and the oxidizing agent.

8. (Original) The organic stripping composition as claimed in claim 7, wherein the amount of the acetic acid, ammonium hydroxide and hydrogen fluoride is within the range of about 2-15% by volume based on the total volume of the composition.

9. (Original) The organic stripping composition as claimed in claim 1, wherein an etching selectivity of the composition onto an oxide type polymer with respect to at least one material selected from the group consisting of Si, W, Al, Ti, TiN, and CoSi is within the range of from about 50:1 to about 4:1.

10. (Original) An etching method in a semiconductor processing comprising:
dry etching an oxide using a plasma;
ashing the etched oxide to remove an organic material; and
supplying an organic stripping composition to remove residues including any residual organic material, a metal polymer, and an oxide type polymer, the organic stripping composition comprising a first compound including a hydroxyl ion (OH^-), a second compound including a fluorine ion (F^-) and a sufficient amount of an oxidizing agent to control the pH of the composition to within the range of from about 6.5 to about 8.0.

11. (Original) The etching method as claimed in claim 10, wherein a silicon layer is exposed by the etching.

12. (Original) The etching method as claimed in claim 10, wherein at least one layer comprising a material selected from the group consisting of W, Al, Ti, TiN and CoSi is exposed by the etching.

13. (Original) The etching method as claimed in claim 10, wherein the oxidizing agent is nitric acid (HNO_3).

14. (Original) The etching method as claimed in claim 13, wherein the composition comprises acetic acid, ammonium hydroxide, hydrogen fluoride and the oxidizing agent and the pH of the composition is within the range of from about 6.5 to about 7.0.

15. (Original) The etching method as claimed in claim 10, wherein the oxidizing agent is at least one selected from the group consisting of hydrogen peroxide (H_2O_2), peroxonitric acid (HNO_4), peroxophosphoric acid (H_3PO_5), peroxosulfuric acid (H_2SO_5), and mixtures thereof.

16. (Original) An organic stripping composition prepared by mixing a first compound including a hydroxyl ion (OH^-), a second compound including a fluorine ion (F^-) and a sufficient amount of an oxidizing agent to control the pH of the composition within the range of from about 6.5 to about 8.0.

17. (Original) The organic stripping composition as claimed in claim 16, wherein the oxidizing agent is nitric acid (HNO_3).

18. (Original) The organic stripping composition as claimed in claim 17, wherein the pH of the composition is within the range of from about 6.5 to about 7.0.

19. (Original) The organic stripping composition as claimed in claim 16, wherein the oxidizing agent is at least one selected from the group consisting of hydrogen peroxide (H_2O_2), peroxonitric acid (HNO_4), peroxophosphoric acid (H_3PO_5), peroxosulfuric acid (H_2SO_5), and mixtures thereof.

20. (New) The organic stripping composition as claimed in claim 3, wherein the organic stripping composition includes nitric acid and a mixture of:

75-85% by volume of dimethylacetamide;

5-15% by volume of water; and

2-15% by volume of acetic acid, ammonium hydroxide, and hydrofluoric acid,

wherein the ratio of nitric acid to the mixture ranges from about 1:200 to about 1:250.

21. (New) The organic stripping composition as claimed in claim 6, wherein the amount of the second compound including the fluorine ion is less than 1% by weight, based on the total weight of the composition.